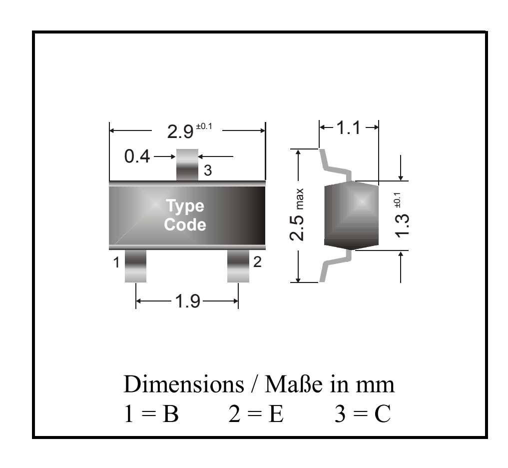
PNP	**Surface mount Si-Epitaxial PlanarTransistors** **Si-Epitaxial PlanarTransistoren für die Oberflächenmontage**	**PNP**



Dimensions / Maße in mm
1 = B 2 = E 3 = C

Power dissipation – Verlustleistung	250 mW
Plastic case Kunststoffgehäuse	SOT-23 (TO-236)
Weight approx. – Gewicht ca.	0.01 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped and reeled
Standard Lieferform gegurtet auf Rolle

Maximum ratings (T_A = 25˚C) **Grenzwerte (T_A = 25˚C)**

			BCW 67	**BCW 68**
Collector-Emitter-voltage	B open	$-V_{CE0}$	32 V	45 V
Collector-Base-voltage	E open	$-V_{CB0}$	45 V	60 V
Emitter-Base-voltage	C open	$-V_{EB0}$	5 V	
Power dissipation – Verlustleistung		P_{tot}	250 mW [1])	
Collector current – Kollektorstrom (DC)		$-I_C$	800 mA	
Peak Collector current – Kollektor-Spitzenstrom		$-I_{CM}$	1000 mA	
Base current – Basis-Spitzenstrom		$-I_B$	100 mA	
Peak Base current – Basis-Spitzenstrom		$-I_{BM}$	200 mA	
Junction temperature – Sperrschichttemperatur		T_j	150˚C	
Storage temperature – Lagerungstemperatur		T_S	- 65…+ 150˚C	

Characteristics (T_j = 25˚C) **Kennwerte (T_j = 25˚C)**

			Min.	**Typ.**	**Max.**
Collector-Base cutoff current – Kollektorreststrom					
$I_E = 0$, $-V_{CB} = 32$ V	BCW 67	$-I_{CB0}$	–	–	20 nA
$I_E = 0$, $-V_{CB} = 32$ V, $T_j = 150$˚C	BCW 67	$-I_{CB0}$	–	–	20 µA
$I_E = 0$, $-V_{CB} = 45$ V	BCW 68	$-I_{CB0}$	–	–	20 nA
$I_E = 0$, $-V_{CB} = 45$ V, $T_j = 150$˚C	BCW 68	$-I_{CB0}$	–	–	20 µA
Emitter-Base cutoff current – Emitterreststrom					
$I_C = 0$, $-V_{EB} = 4$ V		$-I_{EB0}$	–	–	20 nA

[1]) Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluß

Characteristics (T_j = 25°C) **Kennwerte (T_j = 25°C)**

			Min.	Typ.	Max.
Collector saturation volt. – Kollektor-Sättigungsspg. [1]					
- I_C = 100 mA, - I_B = 10 mA		- V_{CEsat}	–	–	300 mV
- I_C = 500 mA, - I_B = 50 mA		- V_{CEsat}	–	–	700 mV
Base saturation voltage – Basis-Sättigungsspannung [1]					
- I_C = 100 mA, - I_B = 10 mA		- V_{BEsat}	–	–	1.25 V
- I_C = 500 mA, - I_B = 50 mA		- V_{BEsat}	–	–	2 V
DC current gain – Kollektor-Basis-Stromverhältnis [1]					
- V_{CE} = 10 V, - I_C = 100 μ mA	BCW 67A / 68F	h_{FE}	35	–	–
	BCW 67B / 68G	h_{FE}	50	–	–
	BCW 67C / 68H	h_{FE}	80	–	–
- V_{CE} = 1 V, - I_C = 10 mA	BCW 67A / 68F	h_{FE}	75	–	–
	BCW 67B / 68G	h_{FE}	120	–	–
	BCW 67C / 68H	h_{FE}	180	–	–
- V_{CE} = 1 V, - I_C = 100 mA	BCW 67A / 68F	h_{FE}	100	160	250
	BCW 67B / 68G	h_{FE}	160	250	400
	BCW 67C / 68H	h_{FE}	250	350	630
- V_{CE} = 2 V, - I_C = 500 mA	BCW 67A / 68F	h_{FE}	35	–	–
	BCW 67B / 68G	h_{FE}	60	–	–
	BCW 67C / 68H	h_{FE}	100	–	–
Gain-Bandwidth Product – Transitfrequenz					
- V_{CE} = 5 V, - I_C = 50 mA, f = 100 MHz		f_T	–	200 MHz	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität					
- V_{CB} = 10 V, I_E = i_e = 0, f = 1 MHz		C_{CB0}	–	6 pF	–
Emitter-Base Capacitance – Emitter-Basis-Kapazität					
- V_{EB} = 0.5 V, I_C = i_c = 0, f = 1 MHz		C_{EB0}	–	60 pF	–

Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R_{thA}	420 K/W [2]
Recommended complementary NPN-transistors Empfohlene komplementäre NPN-Transistoren		BCW 65, BCW 66

Marking – Stempelung	BCW 67A = DA	BCW 67B = DB	BCW 67C = DC
	BCW 68F = DF	BCW 68G = DG	BCW 68H = DH

[1]) Tested with pulses t_p = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 μs, Schaltverhältnis ≤ 2%
[2]) Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluß